

CLAIMS

What is claimed is:

1. An accessibility service tool providing accessibility services on demand for converting between content types, said accessibility service tool comprising:
 - a media manager receiving media input in one content format;
 - a transformation and augmentation unit receiving said media input from said media manager and determining a conversion from said one content format to an accessible format, whereby said accessible format provides accessibility to media input content by individuals not having accessibility to said media input content in said one content format;
 - an auction manager receiving selected media input from said transformation and augmentation unit, said auction manager identifying a service provider for said conversion responsive a conversion determination from said transformation and augmentation unit; and
 - a background training unit training automatic conversion of said media input content.
2. An accessibility service tool as in claim 1, wherein said transformation and augmentation unit comprises:
 - a task analyzer analyzing said media input content and determining a conversion type being requested;
 - a task splitter distilling said media input content into content components responsive to a determined said conversion type;
 - a pathfinder finding paths for each of said content components responsive to said determined conversion type; and

a component router selecting a most efficient path among said paths for said each of said content components.

3. An accessibility service tool as in claim 2, wherein said content components include audio for transcription and audio and text alignment information.

4. An accessibility service tool as in claim 2, wherein said content components include task components for determining accuracy of the audio transcription from the type of audio, the source, the desired service, and the best method for transcription.

5. An accessibility service tool as in claim 2, wherein said paths are paths over a network to service providers capable of converting corresponding ones of said components.

6. An accessibility service tool as in claim 2, wherein said most efficient path is a lowest cost path.

7. An accessibility service tool as in claim 1, wherein said auction manager comprises:

an estimator providing estimates of conversion related factors;

a history/prediction analyzer retaining previous estimates and adjusting said previous estimates responsive to feedback regarding reliability of said previous estimates;

a negotiator requesting bids for services from prospective service providers, comparing received said bids with said estimates and resolving conflicts with said prospective service providers;

a posting distributor maintaining information and distributing maintained said information about said requested services to said negotiator; and

a communicator communicating requests for bids to said prospective service providers and said received bids to said negotiator.

8. An accessibility service tool as in claim 7, wherein said conversion related factors include time for a service to complete a conversion, cost of completing said conversion, available financial resources and user privacy and confidentiality requirements.

9. An accessibility service tool as in claim 7, wherein said information being distributed by said posting distributor includes cost and status of said services and access to available tools.

10. An accessibility service tool as in claim 7, wherein said estimator has access to a money account containing pooled money available for paying said service providers as agreed to by said negotiator.

11. An accessibility service tool as in claim 1, wherein said background training unit comprises:

- an error predictor/estimator determining the likelihood of errors in an automatic conversion of said media input content;

- an automatic media content conversion unit automatically converting any of said media input content determined to be likely to have a likelihood of errors below a selected threshold;

- a media content model database containing models for previously converted media content; and

- a content model source identifier identifying content in said media input content originating from a source in common with a content model in said content model database, said automatic media content conversion unit automatically converting identified said media input content based on the common said content model.

12. An accessibility service tool as in claim 11, wherein said selected media input content is audio being converted to text, said automatic media content conversion unit is

an automatic speech recognition unit and said media content model database is an acoustic model database.

13. An accessibility service tool as in claim 12, wherein said auction manager includes a switch control switching between automatic conversion and manual conversion responsive to said likelihood of errors determined by said error predictor/estimator, audio having said likelihood of errors below said threshold being automatically converted and audio having said likelihood of errors below said threshold being manually converted.

14. A computer program product for providing accessibility services on demand, said computer program product comprising a computer usable medium having computer readable program code thereon, said computer readable program code comprising:

computer readable program code means for receiving media content in a pre-existing content format;

computer readable program code means for extracting conversion information from received said media content, extracted said information including a type of conversion from said pre-existing content format to a selected accessible format, said selected accessible format providing accessibility to said media by individuals not having accessibility in said pre-existing content format;

computer readable program code means for distributing extracted said information to a plurality of prospective service providers;

computer readable program code means for requesting quotes from said plurality of prospective service providers and receiving bids for converting received selected media content responsive to said distributed extracted information and requests for said quotes;

computer readable program code means for identifying service providers for conversion responsive to received said bids from said plurality of prospective service providers; and

computer readable program code means for training automatic conversion of said selected media content being converted by identified said service providers.

15. A computer program product for providing accessibility services on demand as in claim 14, wherein the computer readable program code means for extracting conversion information comprises:

computer readable program code means for analyzing said media content and determining a conversion type being requested;

computer readable program code means for distilling said media content into content components responsive to a determined said type of conversion;

computer readable program code means for finding paths to said prospective service providers for each of said content components responsive to said determined type of conversion; and

computer readable program code means for selecting a most efficient path among said paths for said each of said content components.

16. A computer program product for providing accessibility services on demand as in claim 15, wherein said computer readable program code means for requesting quotes comprises:

computer readable program code means for providing estimates of conversion related factors;

computer readable program code means for retaining previous said estimates and adjusting said previous estimates responsive to feedback regarding reliability of said previous estimates;

computer readable program code means for requesting bids for services from prospective service providers, comparing received said bids with said estimates and resolving conflicts with said prospective service providers;

computer readable program code means for maintaining information and distributing maintained said information about said requested services; and

computer readable program code means for communicating requests for bids to said prospective service providers and receiving prospective service providers bid.

17. A computer program product for providing accessibility services on demand as in claim 16, wherein said computer readable program code means for training automatic conversion comprises:

computer readable program code means for maintaining a media content model database containing models for previously converted media content;

computer readable program code means for identifying content in said media content originating from a source in common with a content model in said content model database; and

computer readable program code means for automatically converting media content based on the common said content model.

18. A computer program product for providing accessibility services on demand as in claim 17, said computer readable program code means for training automatic conversion further comprising:

computer readable program code means for determining the likelihood of errors in an automatic conversion of said media content; and

computer readable program code means for switching between automatic conversion and manual conversion responsive to said likelihood of errors, media content having said likelihood of errors below said threshold being automatically converted and media content having said likelihood of errors below said threshold being sent for manual conversion.

19. A computer program product for providing accessibility services on demand as in claim 18, wherein said media content is multimedia including audio being converted to text, said automatic conversion is an automatic speech recognition and said media content model database is an acoustic model database.

20. A computer program product for providing accessibility services on demand as in claim 19, wherein said computer readable program code means for identifying service providers comprises:

computer readable program code means for accessing a money account containing pooled money available for paying said service providers and said computer readable program code means for selecting said most efficient path selects said most efficient path responsive to an account balance of said money account.

21. A computer program product for providing accessibility services on demand as in claim 14, further comprising:

computer readable program code means for providing a caption me now link on participating web pages.

22. A method of providing accessibility services on demand comprising the steps of:

- a) receiving media content in a pre-existing content format;
- b) extracting conversion information from received said media content, extracted said information including a type of conversion from said pre-existing content format to a selected accessible format, said selected accessible format providing accessibility to said media by individuals not having accessibility in said pre-existing content format;
- c) distributing extracted said conversion information with a request for bids to a plurality of prospective service providers;
- d) receiving bids for converting received selected media content from said plurality of prospective service providers;
- e) identifying service providers for conversion responsive to received said bids from said plurality of prospective service providers; and
- f) distributing said selected media content to identified said service providers for conversion.

23. A method of providing accessibility services on demand as in claim 22, before the step (a) of receiving media content further comprising the steps of:

- a1) defining media content format for content providers, defined said media content format facilitating conversion to other content formats; and
- a2) providing media content in said defined media content format.

24. A method of providing accessibility services on demand as in claim 23, wherein provided said media content is streaming content from a webcast and the step (a) of receiving media content is initiated by selecting a web page link.

25. A method of providing accessibility services on demand as in claim 22, wherein a database of previous estimates is being maintained and the step (b) of extracting conversion information comprises the steps of:

- i) analyzing said media content and determining a conversion type being requested;
- ii) distilling said media content into content components and conversion related factors responsive to a determined said type of conversion; and
- iii) providing estimates responsive to said conversion related factors.

26. A method of providing accessibility services on demand as in claim 25, wherein the step (d) of receiving bids comprises the steps of:

- i) distributing said conversion factors to prospective service providers;
- ii) requesting bids for services from said prospective service providers; and
- iii) receiving service provider received bids.

27. A method of providing accessibility services on demand as in claim 26, wherein the step (e) of identifying service providers comprises the steps of:

- i) comparing said service provider bids with said estimates;

- ii) resolving conflicts with said prospective service providers;
- iii) finding paths to said prospective service providers for each of said content components responsive to said determined type of conversion;
- iv) selecting a most efficient path among said paths for said each of said content components, said most efficient path being the path having the highest likelihood of completion for the lowest cost; and
- v) adjusting said previous estimates in said database responsive to feedback regarding reliability of said previous estimates.

28. A method of providing accessibility services on demand as in claim 27, wherein said database is a media content model database containing models for previously converted media content and the step (f) of distributing said selected media content comprises the steps of:

- i) identifying whether content in said media content originates from a source in common with a content model in said content model database;
- ii) determining the likelihood of errors in an automatic conversion of said media content; and
- iii) switching between automatic conversion and manual conversion responsive to said likelihood of errors, media content having said likelihood of errors below said threshold being automatically converted based on the common said content model and media content having said likelihood of errors below said threshold being sent for manual conversion.

29. A method of providing accessibility services on demand as in claim 27, wherein the step (e)(iv) of selecting said most efficient path comprises accessing a money account containing pooled money available for paying said service providers and said most efficient path being selected responsive to an account balance of said money account.

30. A method of providing accessibility services on demand as in claim 29, wherein said media content is multimedia including audio being converted to text, said automatic conversion is an automatic speech recognition, said media content model database is an acoustic model database and said multimedia is received responsive to selection of a link on a webpage linked to said multimedia.